

Trip Generation

October 25, 2022

DelDOT Development Summit

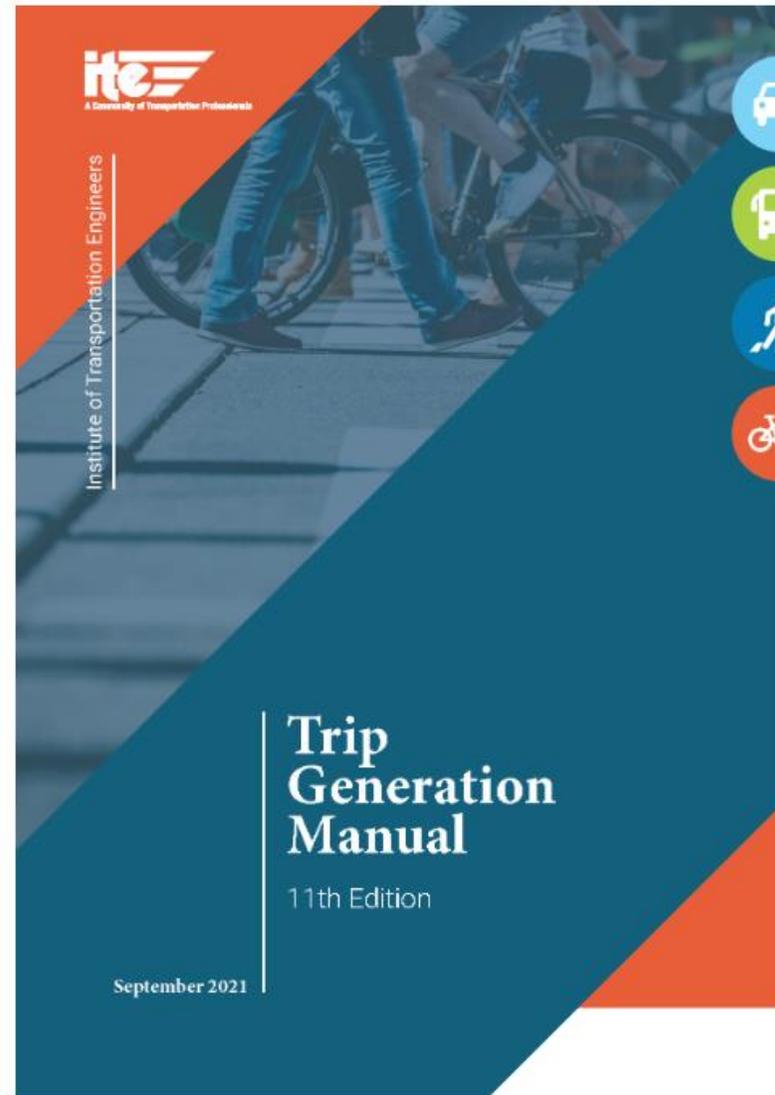
Presented by:

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Presentation Outline

- ▶ Trip Generation 11th Edition Updates
- ▶ Rates vs. Fitted Curve Equations
- ▶ Traffic Generation Diagrams
- ▶ Questions



The background features a residential street scene. On the left, a two-story house with light-colored siding and a dark roof is visible. In the center, a speed limit sign for 35 mph is mounted on a post. The right side shows a grassy area with trees. The entire scene is overlaid with a semi-transparent white and light blue geometric design.

Trip Generation 11th Edition Updates

▶ Residential Land Uses

▶ New Land Uses:

- ▶ Single-Family Attached Housing (LUC 215)
- ▶ Senior Adult Housing-Single Family (LUC 251)
 - ▶ Combination of detached and senior adult housing-attached
- ▶ Senior Adult Housing- Multifamily (LUC 252)

▶ Multifamily Housing Land Uses

- ▶ Number of floors threshold revised
 - ▶ Low rise - 3 or less floors
 - ▶ Mid-rise - between 4 and 10 floors
- ▶ Proximity of residential land uses to a rail transit station added as a subcategory



Trip Generation 11th Edition Updates

▶ Institutional Land Uses

- ▶ Independent variable of KSF was removed from:
 - ▶ Elementary School
 - ▶ Middle School/Junior High School
 - ▶ High School land uses

▶ Office Land Uses

- ▶ Medical-Dental Office Building (LUC 720) - two subcategories
 - ▶ Stand-alone
 - ▶ Located within or adjacent to a hospital campus

Trip Generation 11th Edition Updates

▶ Shopping Center

- ▶ Three separate land use codes
 - ▶ LUC 820: Shopping Center > 150k SF
 - ▶ LUC 821: Shopping Plaza between 40k and 150k SF
 - ▶ Subcategories with or without a supermarket
 - ▶ LUC 822: Strip Retail Plaza < 40k SF





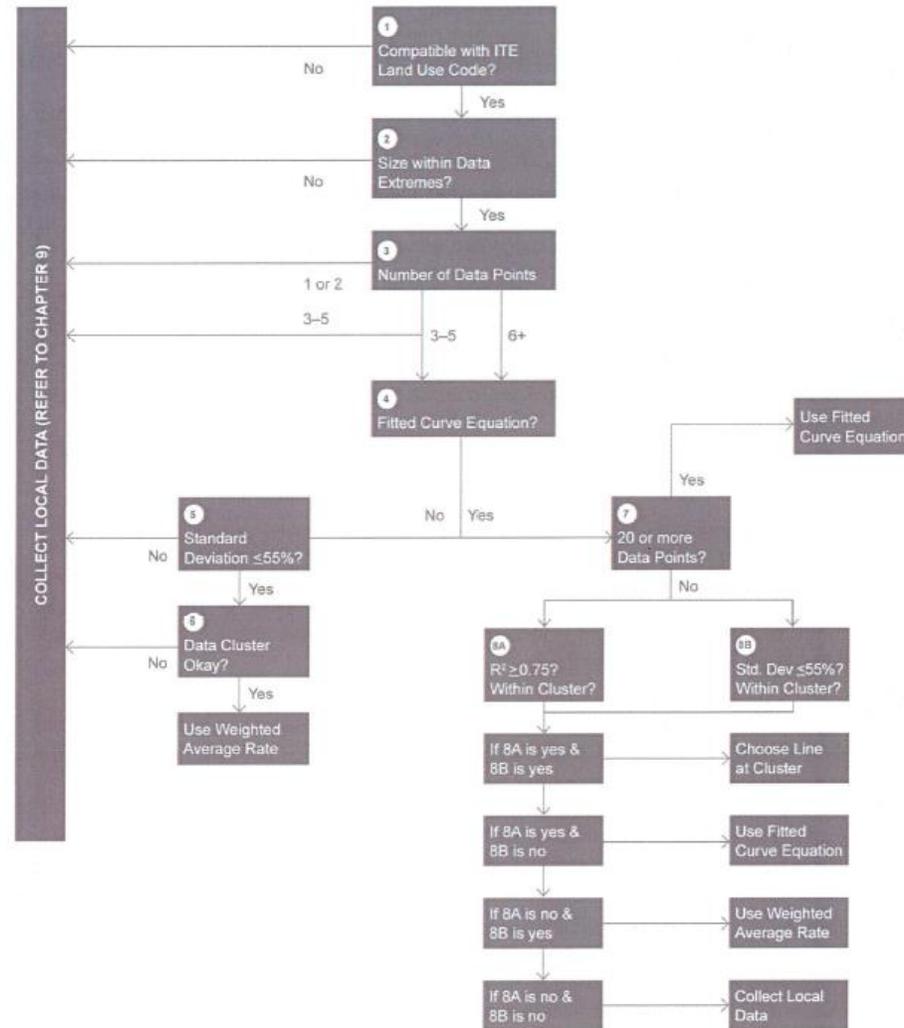
Trip Generation 11th Edition Updates

- ▶ Convenience Store/Gas Station (LUC 945) added
 - ▶ Subcategories added:
 - ▶ Number of vehicle fueling positions
 - ▶ Gross floor area
 - ▶ Removed ITE Trip Generation 10th Edition land use codes:
 - ▶ Convenience Market with Gasoline Pumps
 - ▶ Gasoline/Service Station with Convenience Market
 - ▶ Super Convenience Market/Gas Station

Rates vs. Fitted Curve Equations

- ▶ Per ITE Trip Generation Manual Handbook 3rd Edition (Figure 4.2)
 - ▶ 20 or more data points, Fitted Curve Equation
 - ▶ Five or less data points, collect local data
- ▶ Additional data with every new edition of ITE Trip Generation
 - ▶ Previously accepted practices could be revisited

Figure 4.2 Process for Selecting Average Rate or Equation in Trip Generation Manual Data

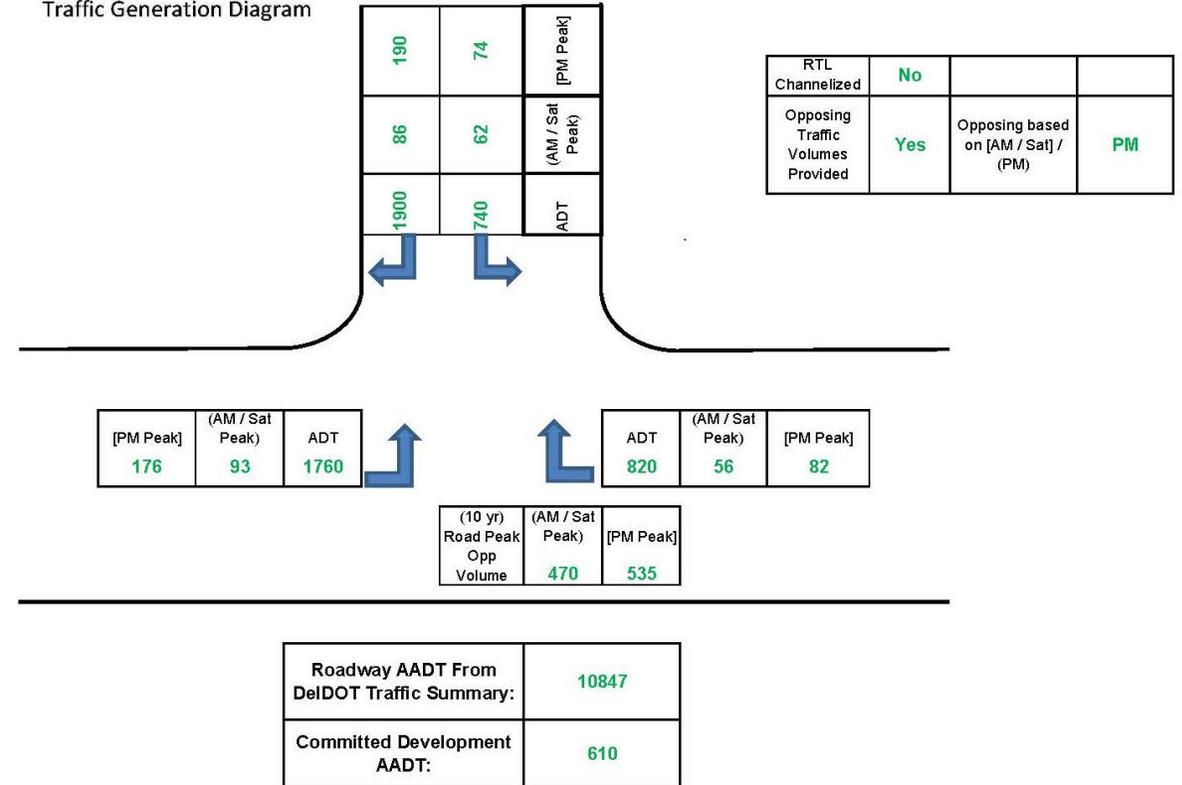


Traffic Generation Diagrams - Purpose

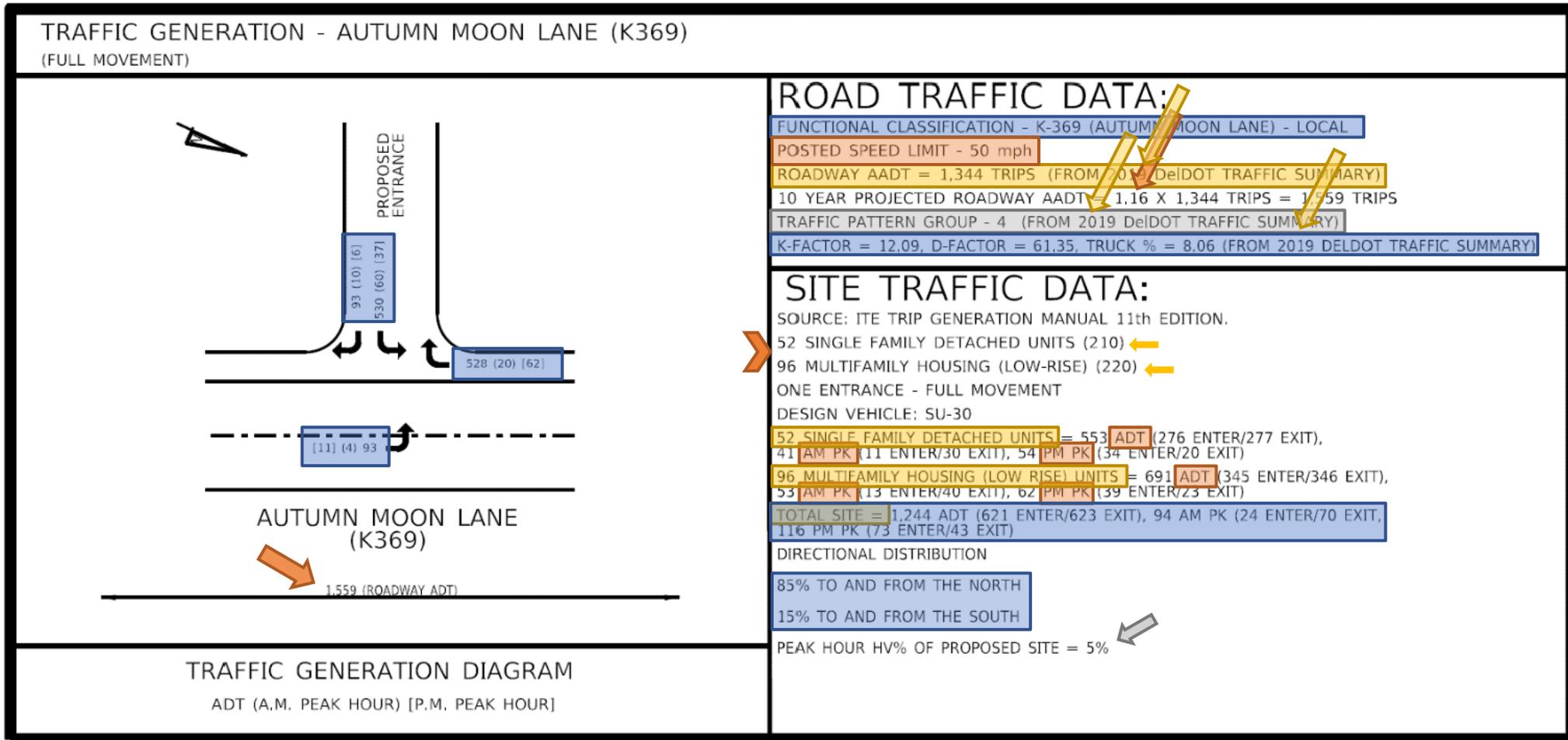
- ▶ Traffic Impact Study (TIS) or Area-Wide Study Fee
 - ▶ DCM Section 2.2.2 Traffic Impact Studies - Warrants
 - ▶ >500 vpd or 50 vph
 - ▶ Local Land Use Agency requirements
 - ▶ DCM Section 2.2.2.2 Area-Wide Study Fee
 - ▶ <2,000 vpd and 200 vph
- ▶ Auxiliary Lane Worksheet Inputs
 - ▶ Road Traffic Data
 - ▶ Turning Movements

May 26, 2022

Traffic Generation Diagram

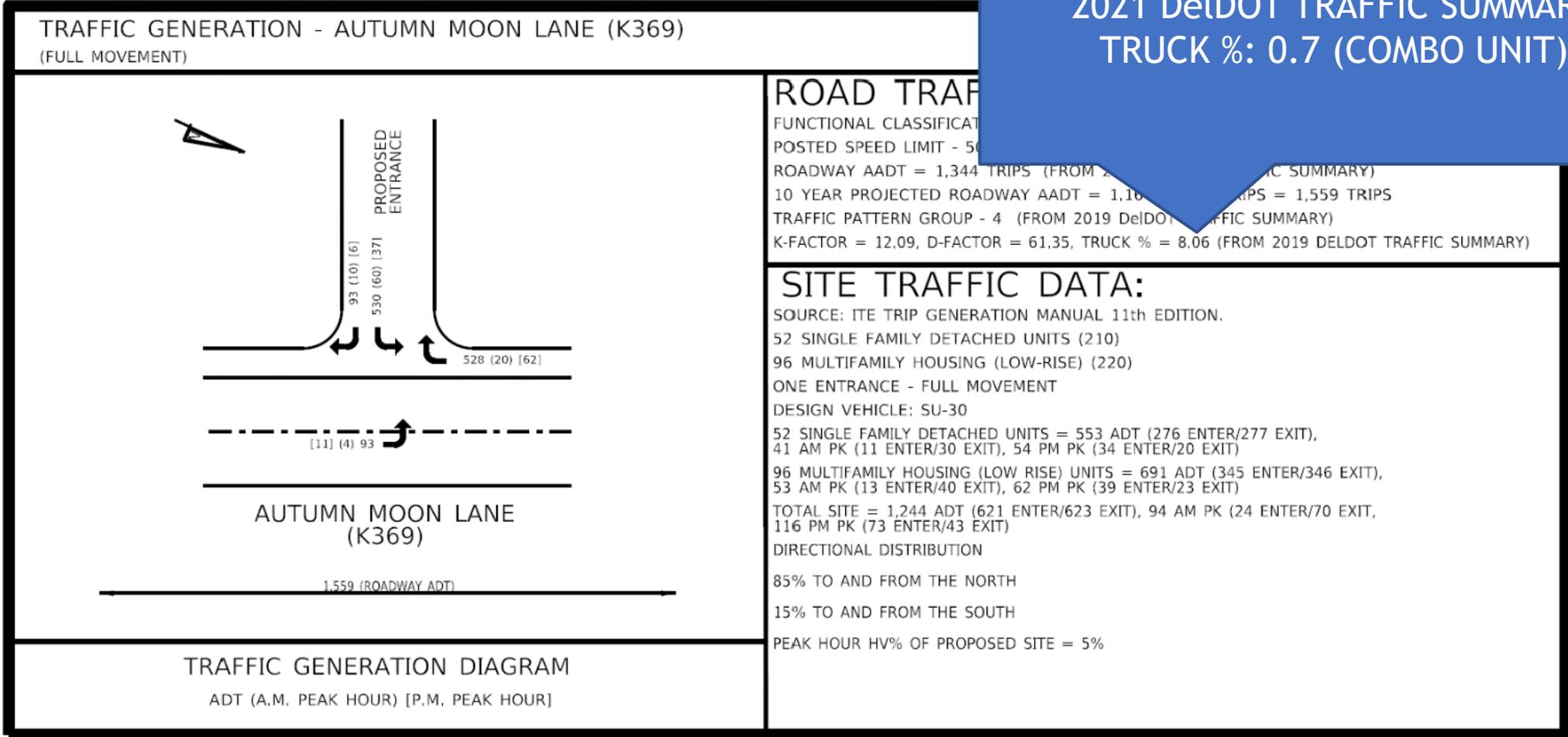


Traffic Generation Diagram



Traffic Generation Diagram

UPDATE FOR
2021 DeIDOT TRAFFIC SUMMARY
TRUCK %: 0.7 (COMBO UNIT)



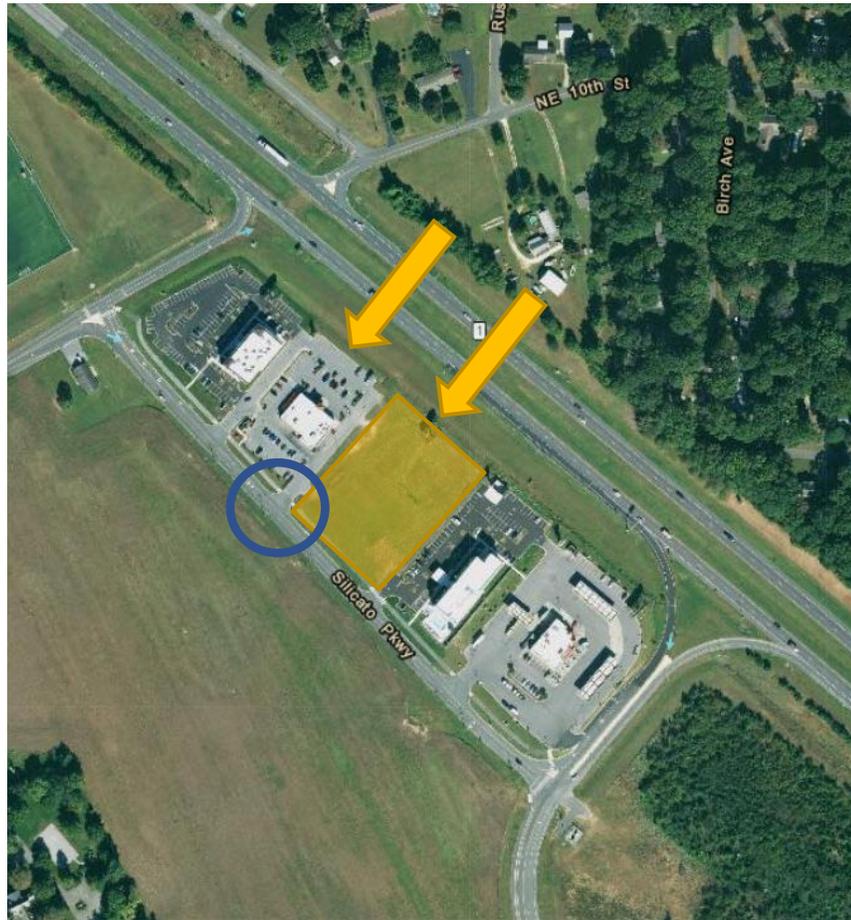


Traffic Generation Diagram

- ▶ Items to remember
 - ▶ List unique characteristics
 - ▶ Size of use (SF, number of units, number of students, etc.)
 - ▶ Number of vehicle fueling positions (if applicable)
 - ▶ Distance to nearby train (if applicable)
 - ▶ Could consider internal capture and pass-by
 - ▶ Interconnection

Traffic Generation Diagram

- ▶ Sites with existing entrances:
 - ▶ Provide traffic volumes at existing entrance
 - ▶ Trip Generation
 - ▶ Existing
 - ▶ Proposed (entire development)
 - ▶ Difference
 - ▶ Turning movements on diagram should show all traffic utilizing entrance
 - ▶ Include adjacent uses





Questions?